EA-1132; Environmental Assessment and Finding of No Significant Impact for the Protected Area Reconfiguration Project, December 1995

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1.0 INTRODUCTION

The Department of Energy (DOE) has decided to consolidate, process, and store Category I and II Special Nuclear Material (SNM) in Building 371 at the Rocky Flats Environmental Technology Site (also referred to as Rocky Flats or the Site) for a 10-15 year interim storage period (Figure 1-1). The purpose of the consolidation is to improve safeguards and security of SNM and to reduce baseline facility and personnel costs. The planned SNM consolidation effort is described in DOE/EA 1060 (DOE, 1995).

Category I and II SNM is generally defined as quantities of nuclear material that pose an attractive theft or sabotage target, and thus require very stringent measures of protection. SNM must be protected by an extensive, highly trained guard force and by security monitoring equipment such as alarms and monitors. Currently the buildings that store SNM are located within the Site's Protected Area (PA) in a high security area approximately 200 acres in size with access controlled by protective force personnel and surrounded by a Perimeter Intrusion Detection and Assessment System (PIDAS). See Figure 1-2 for a map of the Site and the current PA and PIDAS configurations (No action alternative - Alternative E).

Once all SNM is consolidated into Building 371, maintaining the full 200-acre PA would no longer be necessary. Only Building 371 would require the level of security provided by the PIDAS. As a consequence, the PA could be reconfigured to include only the protection requirements necessary for Building 371.

In addition, budget constraints require DOE to reduce baseline costs for operating facilities. Costs associated with required protective force coverage and security equipment maintenance could be decreased through reduction of the size of the PA. Estimated cost savings are $25 million per year.

It should be noted that the Defense Nuclear Facility Safety Board, an oversight board responsible for reviewing DOE nuclear facilities, has recommended that the DOE consider alternatives for SNM storage, including constructing a new SNM storage facility. If the decision is made to not consolidate in Building 371, the project to construct a new PIDAS fence would not be needed. Construction of a new building would require construction of a PIDAS designed for the new building.

This environmental assessment addresses the potential environmental impacts resulting from the proposed action, the no action alternative, and other alternatives that were investigated.

2.0 PURPOSE AND NEED

In light of the shrinking budget being allocated to Rocky Flats and the cost to maintain the current PA, DOE needs to provide security for SNM stored at Rocky Flats in a more cost-effective manner.

3.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

3.1 PIDAS Overview

SNM must be protected per DOE Orders and regulations. There are no alternatives that would comply with SNM protection requirements other than: (1) reconfiguring the PIDAS; or (2) continuing to maintain the current PIDAS. The proposed action and all other alternatives, other than the no action alternative, would result in reconfiguring the

PIDAS. All alternatives are located within the current PA, which is primarily an industrial area with limited open space areas between buildings and facilities. The no action alternative would result in continued maintenance of the current configuration of the PIDAS.

Therefore, this project would modify the existing PA by constructing a length of PIDAS east of Building 371 that would tie into the existing PIDAS fence on the north and south side of Building 371. The new length of PIDAS would be constructed so that Building 371 is completely enclosed in a fully operational PIDAS.

The different alternatives have the same engineering design criteria. Differences between alternatives are due to PIDAS site locations only. PIDAS alternatives are based on standard design elements which require compatibility between the existing security system and any proposed modifications or alterations. The following design criteria are required for all PIDAS configuration alternatives:

- Compatibility with current PIDAS physical dimensions, detection and assessment systems, and computer hardware and software is required.
- The PIDAS shall be capable of operating 24 hours per day, 365 days per year, and during all weather conditions.
- Regular power, uninterrupted power supply, and emergency power would be required for lights, alarms, and assessment systems in the detection zone of the PIDAS.
- An emergency access gate would be installed with lockable gates, in addition to the required fencing, paving and security measures.
- A guard tower would be constructed of a design similar to the existing guard towers, with upgrades to meet current Rocky Flats design criteria, as appropriate (Figure 3-1).

Alternate routes for the new PIDAS section were examined for environmental impact (e.g., wetlands impact), feasibility, cost, and complexity. In the event of wetlands impact, DOE would mitigate these effects through the Site Wetland Mitigation Bank Memorandum of Agreement under negotiation between the DOE, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service. The compensatory agreement is being negotiated to establish a process to manage cumulative effects for all Site activities.

3.2 Proposed Action (Alternative A)

The proposed reconfiguration of the PA, shown as Alternative A in Figure 3-1, would involve construction of a new length of PIDAS running north/south and east of Building 371 from Sector 6 to Sector 19. The existing PIDAS on the north and south of Building 371 would be modified, as necessary, to tie to the new fence length.

The proposed action consists of reconfiguring the security fence and systems to include only Building 371 (Figure 3-1). This alternative was investigated because it bypassed the 517/518 substation, would have minimal impact on wetlands, and has a fairly straight-line and a minimally intrusive configuration, and would facilitate meeting security requirements.

The proposed action has been designed to minimize potential harm to wetlands. While wetlands would be impacted, DOE would mitigate these effects. The wetlands affected by the proposed action would be .038 acre, or less than 4/10s of a football field. This impact is below the *de minimis* level (0.1 acre) requiring permit action under the Clean Water Act.

The new PIDAS, comprising approximately 1,100 feet of inner and outer fence, would connect with the existing PIDAS to the north and south. The proposed PIDAS would be 50 feet wide with a 20-foot-wide patrol road along the inner boundary. Installation would require leveling of existing topography by use of fill dirt. Additional soil would have to be added to the area affected by the new PIDAS fence such that elevation changes in the fence route would be gradual to allow for visibility from a security standpoint. The project would be designed to minimize soil excavation using a balanced cut and fill design to the extent feasible. The design would also allow for proper drainage of the area around the new fence line. The portions of the existing PIDAS fence that would not be needed to enclose Building 371 would be taken out of service.

In Alternative A, a new guard tower, similar to existing towers, but with appropriate upgrades to meet current Site design criteria, would be constructed north of Substation 517/518, along the proposed new length of PIDAS. An emergency access gate would be installed immediately north of the existing Building 550 guard tower. The access would include lockable gates, required fencing, paving, and security measures.

Preliminary hydrology studies indicate that a new 30-inch culvert would be necessary to direct runoff from the hillside northeast of Building 371 under the proposed PIDAS. Also, an 18-inch culvert would be required to carry runoff under the new patrol road, where it would intersect with the existing patrol road and under the cul-de-sac at the north end of the new security zone. A 200-foot length of existing 60-inch culvert within the drainage channel would likely be removed and replaced with culvert of similar size that is more conducive to installation of physical security barriers. Final hydrology studies would be conducted during Title I/II design to determine final drainage requirements. All drainage structures (including security constrictions with the culverts) would be designed for 25-year, 6-hour storm requirements per DOE regulations.

The proposed routing of the PIDAS and patrol road would pass over buried utility lines which run parallel to Sixth Street and a 10-inch water line, a natural gas line, a telephone line duct, and a 13.8 kV electrical line. Overhead power lines to Substations 517 and 518 cross over the east side of the proposed PIDAS: the power lines would have to be raised to clear the PIDAS fencing. All utility disruptions during construction would be minimized and coordinated with appropriate operations personnel.

3.3 No Action Alternative (Alternative E)

The no action alternative, shown as Alternative E in Figure 1-2, would maintain the current 200-acre PA configuration. This option was considered as a baseline for assessing environmental impacts for other alternatives.

3.4 Other Alternatives Considered

Alternatives to the proposed action and no action alternative are described in the following sections (Figure 3-2).

3.4.1 Forty-Foot Secured Zone With Three Fences (Alternative B)

A third alternative, shown as Alternative B in Figure 3-2, was investigated because of its close proximity to Building 371.

Alternative B would consist of a 40-foot secured zone with three fences; an inner, an outer, and a center fence. The PIDAS would be located from the existing PIDAS at Sector 7 north just past the Cooling Tower and then would be angled slightly to the west, connecting to the existing PIDAS near Sector 17.

This alternative requires construction on a steep slope, located close to Building 371. Concerns regarding slope stability and security, due to fence proximity to other structures, resulted in a recommendation to not construct on this location. The design problems could be overcome, but some of the security issues would have resulted in long-term cost implications.

3.4.2 Location Further West of Proposed Action (Alternative C)

A fourth alternative, shown as Alternative C in Figure 3-2, was investigated because it eliminated some of the security concerns identified in Alternative B.

Alternative C would have identical fence and security equipment as the proposed configuration, but would be located further east through the location of the existing electrical substation and connecting with the existing PIDAS at Sector 19.

This alternative would require additional construction because of a need to relocate the substation. Also, large

quantities of fill dirt would be required. The cost impact would be considerable: relocation of the substation would cost approximately $7 million.

3.4.3 Sixth Street and North Location (Alternative D)

A fifth alternative, shown as Alternative D in Figure 3-2, was investigated to avoid wetlands located further west of the location of Alternative D.

Alternative D would also construct an identical fence and security equipment, but would follow Sixth Street north for about 900 feet, then go directly north, connecting with the existing PIDAS near Sector 20.

This alternative would require a relocation of 115kV power poles. In addition, a replacement for Sixth Street would have to be provided. The Public Service Company owns these power lines and would be involved in any relocation effort. The cost to relocate the power poles and lines is estimated at approximately $300K to 500K per pole. Depending on the number of poles involved, the cost could exceed $4 million.

4.0 AFFECTED ENVIRONMENT

4.1 Natural Environment

Rocky Flats is located on 6,266 acres in rural northern Jefferson County, Colorado, 16 miles northwest of Denver (Figure 1-1). The Rocky Flats industrial area occupies approximately 400 acres in the middle of the Site.

Rocky Flats is six miles from the nearest school and ten miles from the nearest hospital. Approximately 291,000 people live within 10 miles of the Site, over 1,100,000 within 20 miles; while the entire metropolitan Denver area, with a population of over 2.1 million is within 50 miles of the Site (EG&G, 1994a). Population centers are generally to the east, northeast and southeast of the Site.

Rocky Flats is located on a broad alluvial terrace at the base of the Rocky Mountains at an elevation of about 6,000 feet. Underlying the Site is the Rocky Flats Alluvium, a gravelly soil composed of cobbles, coarse gravel, and sand over a largely claystone bedrock. Hilly soils on the east side of the Site are quite slump-prone.

Air quality is generally better at Rocky Flats than in the urbanized portion of the Denver metropolitan area. However, the greater Denver area, including Rocky Flats, is a nonattainment area for carbon monoxide and particulates less than 10 microns in size, and is in interim compliance for ozone (EPA, 1994). Rocky Flats air emissions are within permitted limits for all pollutants for which there are standards. Radionuclide emissions from Rocky Flats are limited by Clean Air Act regulations (40 CFR Part 61, Subpart H) to those amounts that would result in the public receiving a dose of 10 millirem per year. The dose of radionuclide emission to the public from Rocky Flats in 1993 was 0.000016 millirem (EG&G, 1994b). In comparison, the annual natural background radiation for the Denver area is approximately 350 millirem (NCRP, 1987).

Surface water drainage from Rocky Flats flows to the east. The developed area of the Site is drained by Woman and Walnut Creeks, while three other streams drain portions of the Buffer Zone. Ponds on Woman and Walnut Creeks store stormwater runoff from the Site and domestic wastewater from the Rocky Flats wastewater treatment plant. The contents of the ponds are analyzed to ensure they meet the standards of the Colorado Water Quality Control Commission prior to release downstream. Scattered wetlands exist throughout the Site including six small wetlands (combined area less than one acre) between Buildings 371 and 776/777.

The Site's Buffer Zone provides habitat potentially suitable for the Ute Ladies'-Tresses (*Spiranthes diluvialis)*, an orchid listed by the U.S. Fish and Wildlife Service as "threatened." However, individuals of the species were not found in three consecutive annual Sitewide surveys (ESCO, 1994). A small community of a Colorado plant "Species of Special Concern," the forktip threeawn (*Aristida basiramea)*, has been identified along the railroad tracks that enter Rocky Flats from the west along the west access road. This area is over a mile from the location of the proposed

action activities. No habitat suitable for either of these species has been documented within the area of the proposed action.

Habitat suitable for the Colorado Butterfly Weed (*Gaura neomexicana* var. *coloradensis)*, a federal Category 2 plant, exists in the Site's Buffer Zone, but no individual of the species has been found in recent surveys (ESCO, 1994). The Colorado Butterfly Weed is a species whose listing by the U.S. Fish and Wildlife Service as "threatened" or "endangered" may be appropriate, but for which adequate data are not available.

The Preble's Mouse (*Zapus hudsonius preblei*) is a Colorado "Species of Special Concern" and a federal Category 2 species which DOE treats as an endangered species. It is a resident of many of the riparian areas of Rocky Flats, including those along Walnut and Woman Creeks. Because the Preble's Mouse is currently under a petition to the U.S. Fish and Wildlife Service to list it as threatened or endangered, ecologists at the Site recommended trapping to determine presence or absence of the species in the work area (Murdock, 1995a). Subsequent trapping in the proposed work area during June and July 1995 produced no captures of the species (Murdock, 1995b and 1995c). Trapping was conducted under current U.S. Fish and Wildlife Services guidelines for the species.

4.2 Built Environment

The Rocky Flats environment is comprised of an industrial area in which the majority of work activities occur and where most of the Site's workers are located. The current PA configuration and locations of Rocky Flat buildings are found at Figure 1-2. The PA includes all plutonium processing and storage facilities on Site. The location of the proposed action is shown in Figure 3-1.

5.0 Environmental Effects

Reconfiguration of the PIDAS would involve grading, dirt filling, and excavating for construction of the PIDAS, the patrol road, the guard tower, and associated drainage structures. Underlying the Site is the Rocky Flats Alluvium, a gravelly soil composed of cobbles, coarse gravel, and sand over a largely claystone bedrock. Soils on the hills on the east side of the Site are quite slump-prone.

5.1 Impact to Water Resources

The proposed action and alternatives have been designed to minimize impact on water resources. Minimal wetlands impacts are anticipated. No other water impacts, due to the Site construction activities of the proposed action or any of the alternatives, including the no action alternative, are anticipated.

The proposed action and Alternatives C and D would impact wetland areas. Figure 5-1 provides a map of wetland areas located within the PA. Figure 5-2 provides a photograph of one of the wetlands areas (1-M(M)) found within the PA that might be impacted by construction.

Wetlands that have been identified as being impacted by one or more of the alternatives include: 1-K (located on the left of Sixth Street); 1-L (located on the north and east sides of the 517/518 substation; and 1-M(N), 1-M(M), and 1-M(S) (located on the east side of Sixth Street). The only alternatives which would have no wetlands impacts are Alternative B and the no action alternative.

The proposed action project area is located in the sloping uplands of North Walnut Creek and would cross one of its headwater drainage channels. A wetlands analysis was conducted and concluded that small areas totaling 0.038 acre of wetlands (approximately 1,675 square feet) would be impacted: earthwork would eliminate a portion of wetlands located within the North Walnut Creek tributary ditch running between Buildings 371 and 771. The proposed action would impact wetlands 1-K, 1-M(N), 1-M(M), and 1-M(S).

In addition, Alternatives C and D impact wetlands. Alternative C would impact the wetlands area located at 1-K, in addition to another wetlands area located around the substation and at the head of the gully east of Building 371 (1-L).

Total wetlands impact would be 0.02 acre. Ecological concerns regarding Alternative D were limited to the destruction of wetlands in drainage ditches along Sixth Street, for a total of 0.025 acre (1-M(N), 1-M(M), and 1M(S)).

As mentioned, above, for cumulative effects for all Site activities, DOE would mitigate impacts to wetlands through the Site Wetland Mitigation Bank Memorandum of Agreement.

Table 5-1 Wetlands Comparison of Alternatives

Alternatives	Wetlands Impacts
Proposed Action - A	4 small areas impacted (0.038 acre total) Includes 1-K, 1-M(N), 1-M(M), 1-M(S)
B	None
C	2 areas impacted (0.020 acre total) Includes 1-K, 1-L
D	3 small areas next to road/ends of culverts in drainage ditches (0.025 acre total) Includes 1-M(N), 1-M(M), 1-M(S)
No Action Alternative - E	None

5.2 Impact on Air Quality

None of the PA reconfiguration alternatives would require new or modified air quality permits. Construction would result in a minor and short-term increase in total suspended particulates and particulates less than a micron in size. Also, emission amounts would be well below existing permit restrictions under the federal Clean Air Act. Construction activity would be exempted from Colorado Department of Public Health and Environment Air Pollutant Emission Notice permitting requirements because the activity would occur on surface areas of less than 25 contiguous acres and would not exceed six months in duration. This exemption does not extend to disturbances of contaminated soils (discussed in Section 5.4).

5.3 Impact on Endangered or Threatened Species

No change in the amount of water discharged to the Platte River is anticipated. As a result, no lower Platte River impacts to threatened or endangered species are expected from any of the alternatives. In addition, no threatened or endangered species, or other Colorado "Species of Special Concern", were found in surveys conducted in 1995 in the undeveloped area east and north of Building 371 (Murdock, 1995a, 1995b, and 1995c).

The proposed action and other alternatives would be located, however, in an area which might be a suitable habitat for the Preble's Mouse -- a Federal Category 2 candidate species, which DOE treats as an endangered species, and is a Colorado Species of Special Concern. It is a resident of the riparian areas of Rocky Flats, including those along Walnut and Woman Creeks. Small mammal trappings were completed in July 1995 and no individuals of the Preble's Mouse were found. Therefore, no effects to the species are expected.

While no Preble's mice have been found, two of the alternatives (the proposed action and Alternative C) would impact areas that are considered potential habitat. Alternative C would run through a gully east of Building 371 and the proposed alternative would impact four small wetlands areas.

Alternatives B, D and the no action alternative would not impact Preble's Mouse habitat.

Table 5-3 Preble's Mouse Comparison of Alternatives

Alternatives	Preble's Mouse Impact
Proposed Action - A	Potential habitat
B	None
C	Potential habitat
D	Wetlands impacts, but not considered appropriate habitat for Preble's Mouse
No Action Alternative - E	None

5.4 Impact to Individual Hazardous Substance Sites

Construction for the proposed action PIDAS configuration would occur in three Individual Hazardous Substance Sites (IHSS) located within the Industrial Area in Operable Units (OU) 8 and 13.

Operable Unit 8 - IHSS 172

OU 8, located in the Building 700 area, includes IHSS 172 (Central Avenue Waste Spill).

The PA reconfiguration project area of disturbance would overlap about a 200 foot section of IHSS 172 along Sixth Street where this paved road slopes downhill to the northeast into the Building 771 area. In IHSS 172, the paved road surface would remain intact and, on the embankment on the southeast shoulder of the road, the ground surface would be scarified and the excavated soil spread within the IHSS. Then, an approximately ten to twenty-five foot thickness of uncontaminated structural backfill would be placed to raise the grade and create a gently sloping surface for the new PIDAS.

Preliminary investigations have been conducted in IHSS 172. IHSS 172 is considered a candidate for no further action: calculated risk levels, identified in a 1995 risk ranking of industrial area IHSSs, are low with respect to risk management policies.

Operable Unit 13 - IHSS 117.1 and 197

OU 13, located in the area immediately south of the existing PIDAS, includes IHSS 117.1 (North Chemical Storage Site) and IHSS 197 (Scrap Metal Sites). Preliminary investigations have also been conducted in IHSSs 117.1 , and 197. These IHSSs are considered by DOE to represent very low health and environmental risks based upon a 1995 risk ranking analysis. They are considered candidates for no further action because calculated risk levels have been determined to be low with respect to risk management policies.

The PA reconfiguration project area of disturbance would overlap only portions of the northerly 30 and 10 feet of IHSSs 117.1 and 197, respectively -- where the new PIDAS section would tie in to the existing PIDAS adjacent to the Building 550 Guard Post. The surface of the IHSSs would be scarified, consisting of removal of vegetation and organic soil in the top six inches of ground, and up to a two-foot depth of soil may be excavated for installation of cables and/or to lower the surface elevation as preparation for laying a special gravel surface layer in the PIDAS. The excavated soils would be spread within the IHSSs.

Alternatives C and D would have similar IHSS concerns as the proposed action. Only Alternative B and the no action alternative would have no IHSS impact.

The risk ranking of IHSSs 117.1 and 197, completed in 1995, is considered preliminary. As a result, DOE would conduct additional limited, focused characterization work in IHSSs 172, 117.1 and 197 to verify that contamination hot spots do not exist. DOE would review characterization results with regulatory agencies to verify that the PIDAS

project would have no effect upon future remediation efforts.

Table 5-4 IHSS Comparison of Alternatives

Alternatives	IHSS Impacts
Proposed Action - A	Sites 172; and Sites 117.1/197
B	None
C	Sites 172; and Sites 117.1/197
D	Sites 172; and Sites 117.1/197
No Action Alternative - E	None

5.5 Waste Management Environmental Effects

Per Site procedures, sampling will be conducted prior to construction throughout the disturbed area of the PA Reconfiguration project, including the IHSSs. In addition, an on-site Soil Disturbance Permit will be issued prior to construction. Depending on the results of IHSS area sampling discussed in Section 5.4 and the sampling conducted for the Soil Disturbance Permit, excavated soil that is removed from the project area may require management as regulated waste. Thus, an increase in hazardous or mixed waste could result from any of the action alternatives, but is not likely based on the OU investigations reports. Any soils disturbed within the IHSSs that are not associated with a contamination hot spot will remain there, eliminating the potential for spread of contamination. The no action alternative would have no impact on waste management issues at Rocky Flats.

5.6 Engineering, Construction, and Security Impacts

Impacts associated with engineering and construction issues were identified in Alternatives B and C and D. Alternative B, because of construction on a steep slope, with the potential for slope stability problems, presents a number of design problems. Also, such construction may affect the seismic response of Building 371. In addition, this alternative resulted in security issues which would result in long-term cost implications. Alternative C would require a relocation of the electrical substation and the placement of large quantities of fill dirt. Relocation of the substation would be costly: approximately $7M.

Alternative D would require relocation of power poles at an estimated cost of $300K to 500K per pole: depending upon the number of poles to be relocated, the cost could exceed $4M.

5.7 Summary of Effects

The no action alternative would serve as a baseline for assessing environmental impacts. It would have no ecological impacts, but would result in continued funding of current operational and security requirements for the 200-acre PA. The proposed action and other alternatives are summarized below with respect to security, engineering and construction concerns; estimated cost impacts; potential waste disposal issues; wetlands impacts; Preble's Mouse impacts; and IHSS affects.

A summary chart, found below, provides a comparison of the proposed alternative, the no action alternative, and other alternatives.

The proposed action would require only minimal exterior construction activities. Impacts upon the natural environment would be minimal. There would be no adverse impacts on water resources, other than wetlands. Wetlands (0.038 acre) would be affected, but would be mitigated. No affects on threatened or endangered species are anticipated. Three IHSSs would be impacted. However, due to the relative risk ranking of the three IHSSs, this impact is expected to be

of no consequence. The proposed action, however, would not preclude future investigation and/or remediation activities. In summary, the proposed action would reduce baseline facility and personnel costs while having minimal environmental impact.

Table 5-7 Summary Comparison of Alternatives

Proposed Action and Alternatives	Security/ Engineering Construction Concerns	Cost Impacts	Waste Disposal Issues	Wetlands Impacts	Preble's Mouse Impact	IHSS Impact
A (proposed action)	Includes guard tower inside fence	Estimated $11M construction costs	Potential impact - excavated soils would be spread within IHSSs	4 small areas impacted (.038 acre) Includes 1-K, 1-M(N), 1-M(M), and 1-M(S)	Potential habitat	Sites 172; and Sites 117.1/197
B	Security issues/ Design problems (slope concerns)	Long-term cost and design implications regarding security and slope issues	No impact	None	None	No IHSS impact
C	Requires relocation of substation; Requires large quantities of fill dirt	Additional $7M to relocate substation; estimated total $18M	Potential impact - excavated soils would be spread within IHSSs	2 areas impacted (.020 acre) Includes 1-K and 1-L	Potential habitat	Sites 172; and Sites 117.1/197
D	Requires relocation of power poles; Requires replacement for Sixth Ave	Maximum cost to relocate poles is $4M; estimated total $15M	Potential impact - excavated soils would be spread within IHSSs	3 small areas next to road (.025 acre) Includes 1-M(N), 1-M(M), and	None	Sites 172; and Sites 117.1/197

				1-M(S)		
E (no action alternative)	None	Continued additional costs of PA maintenance is $25M/year	None	None	None	None

6.0 Agencies and Persons Consulted

Agencies and persons consulted regarding this environmental assessment:

Colorado Department of Public Health and Environment

U.S. Environmental Protection Agency

Agencies and persons consulted regarding the Site Wetland Mitigation Bank Memorandum of Agreement:

U.S. Environmental Protection Agency

U.S. Army Corps of Engineers

U.S. Fish and Wildlife Service

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8.0 Glossary

The glossary is provided to aid in the understanding of technical terms used in this environmental assessment. Alternate definitions may exist that are not applicable to the intended usage in this document.

Category I and II Special Nuclear Material

- SNM is defined as plutonium, uranium-233, and uranium enriched in the isotopes uranium-233 or uranium-245. Category is defined by DOE Order as a designation (Category I, II, III, or IV) of a quantity of SNM based on the "attractiveness level" of the material and the amount of the material present. Attractiveness level is defined as a categorization of SNM types and compositions which reflect the difficulty of processing and handling required to convert material to a nuclear explosive device. Attractiveness is further defined as the material's desirability in light of its potential unauthorized use.

Individual Hazardous Substance Sites (IHSSs)

- IHSSs which have been identified as potentially hazardous substance sites requiring remediation. IHSSs have been established at the Site pursuant to an inter-agency agreement for corrective and remedial action of Resources Conservation and Recovery Act and Comprehensive Environmental Response, Compensation and Liability Act sites.

Interim Storage

- The temporary holding of material when disposal space is not available. Monitoring and human control are provided, and subsequent action involving treatment, transportation, or final disposition is expected.

Operable Unit (OU)

- Sites may be divided into OUs, or discrete actions that comprise incremental steps toward addressing problems. OUs may be remediated in stages, as long as such action is consistent with the final remedy for the site.

Plutonium

- A heavy, radioactive, man-made, metallic element with an atomic number of 94, produced by neutron irradiation of uranium-238. Its most important isotope is fissile plutonium-239. It is used for reactor fuel and in nuclear weapons.

Protected Area -

An area encompassed by physical barriers, such as walls or fences, to which access is controlled, and that contains Category I and II SNM or surrounds a material access area or a vital area.

Safeguards and Security

- Precautionary measures to prevent the unwanted or unauthorized diversion of nuclear materials.

Special Nuclear Material

- Plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which is

determined to be SNM, pursuant to section 51 of the Atomic Energy Act of 1954, but does not include source material, or any material artificially enriched by any of the forgoing.